

| Ref # | Hits | Search Query  | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|---|---|------------------|---------|------------------|
| L1    | 2    | ("6118316").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2005/07/25 08:14 |
| L2    | 1    | vco and 1   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/07/25 08:14 |
| S1    | 2    | ("6008703").PN.   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR               | OFF     | 2005/07/22 10:38 |
| S2    | 2    | hein.in. and perrott.in.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | OFF     | 2004/10/26 13:11 |
| S3    | 2    | ("5036298").PN.   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR               | OFF     | 2004/10/26 15:26 |
| S4    | 1527 | (clock near delay\$4) and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | OFF     | 2004/10/26 15:26 |
| S5    | 436  | (clock near delay\$4) and pll and vco and filter  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | OFF     | 2004/10/26 15:27 |
| S6    | 366  | (clock near delay\$4) and pll and vco and filter and (phase with detect\$4)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | OFF     | 2004/10/26 15:27 |
| S7    | 270  | ((clock near delay\$4) and pll and vco and filter and (phase with detect\$4)) and (ram or rom or fifo or memory or register or storage)             | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | ON      | 2004/10/26 15:28 |
| S8    | 181  | ((clock near delay\$4) and pll and vco and filter and (phase with detect\$4)) and ((ram or rom or fifo or memory or register or storage) with data) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR               | ON      | 2004/10/26 15:28 |

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| S9  | 104   | ((clock near delay\$4) and pll and vco and filter and (phase with detect\$4)) and (((ram or rom or fifo or memory or register or storage) with data) same phase)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 15:29 |
| S10 | 49    | ((((clock near delay\$4) and pll and vco and filter and (phase with detect\$4)) and (((ram or rom or fifo or memory or register or storage) with data) same phase)) and ((vco or oscillat\$4) same (delay\$4 with clock)) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:38 |
| S11 | 16549 | data with phase with detect\$4  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:39 |
| S12 | 3042  | pll and (data with phase with detect\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:39 |
| S13 | 756   | (pll and (data with phase with detect\$4)) and (clock with delay\$4) and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:39 |
| S14 | 266   | (pll and (data with phase with detect\$4)) and (clock with delay\$4 with control\$4) and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:40 |
| S15 | 128   | (pll and (data with phase with detect\$4)) and ((clock with delay\$4 with control\$4) same (phase with detect\$4)) and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:40 |
| S16 | 70    | (pll and (data with phase with detect\$4)) and ((clock with delay\$4 with control\$4) same (phase with detect\$4)) and (delay\$4 with filter)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:45 |
| S17 | 40135 | clock near5 delay\$4  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:45 |
| S18 | 4600  | pll and (clock near5 delay\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:45 |
| S19 | 1593  | pll same (clock near5 delay\$4)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:45 |

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| S20 | 73    | (pll same (clock near5 delay\$4)) and ((clock with delay\$4 with control\$4) same (phase with detect\$4)) and (delay\$4 with filter)        | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:46 |
| S21 | 30249 | clock near3 delay\$4  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:45 |
| S22 | 150   | (clock near3 delay\$4) and ((clock with delay\$4 with control\$4) same (phase with detect\$4)) and (delay\$4 with filter) and pll           | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 16:46 |
| S23 | 39    | (clock near3 delay\$4) and ((clock with delay\$4 with control\$4) same (phase with detect\$4 with data)) and (delay\$4 with filter) and pll | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:02 |
| S24 | 2687  | (clock with delay\$4) and (clock with jitter\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:02 |
| S25 | 1186  | (clock with delay\$4) and (clock with jitter\$4) and pll  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:02 |
| S26 | 1297  | (clock with delay\$4) and (clock with jitter\$4) and (pll or dll)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:03 |
| S27 | 1032  | (clock near4 delay\$4) and (clock with jitter\$4) and (pll or dll)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:03 |
| S28 | 937   | (clock near3 delay\$4) and (clock with jitter\$4) and (pll or dll)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:03 |
| S29 | 793   | (clock near2 delay\$4) and (clock with jitter\$4) and (pll or dll)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:03 |
| S30 | 228   | ((clock near2 delay\$4) and (clock with jitter\$4) and (pll or dll)) and vco and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:03 |
| S31 | 145   | (phase with data) and (((clock near2 delay\$4) and (clock with jitter\$4) and (pll or dll)) and vco and filter)                             | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:04 |

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| S32 | 103    | ((phase with data) and (((clock near2 delay\$4) and (clock with jitter\$4) and (pll or dll)) and vco and filter)) and (delay\$4 with control\$4)            | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/26 20:04 |
| S33 | 39     | ((phase with data) and (((clock near2 delay\$4) and (clock with jitter\$4) and (pll or dll)) and vco and filter)) and ((delay\$4 with control\$4) same vco) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:13 |
| S34 | 189319 | (phase or frequency) near2 (detect\$3 or compar\$4)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:14 |
| S35 | 24318  | oscillator\$1 same delay\$3   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:14 |
| S36 | 3753   | ((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:14 |
| S37 | 195930 | control with phase  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:15 |
| S38 | 1361   | ((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:15 |
| S39 | 11473  | control with phase with delay   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:15 |
| S40 | 12994  | control with phase with delay\$3  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:15 |
| S41 | 777    | ((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase with delay\$3)                           | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 13:23 |
| S42 | 304    | ((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase with delay\$3)) and vco                  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 10:16 |

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| S43 | 168   | (((((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase with delay\$3)) and vco) and (clock with delay\$3)      | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 10:30 |
| S44 | 4     | ("5113152"   "5202906"   "5281863"   "6404291").PN.   | USPAT                                      | OR | OFF | 2004/10/27 10:28 |
| S45 | 3     | "6542038".URPN.   | USPAT                                      | OR | OFF | 2004/10/27 10:30 |
| S46 | 114   | nishimura.in. and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 10:30 |
| S47 | 10    | nishimura.in. and pll and matushita.as.   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:22 |
| S48 | 237   | pll and (delay near filter\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:22 |
| S49 | 263   | pll and (delay\$3 near filter\$4)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:22 |
| S50 | 673   | pll and (delay\$3 near2 filter\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:23 |
| S51 | 777   | ((((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase with delay\$3))  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:23 |
| S52 | 16    | (pll and (delay\$3 near2 filter\$4)) and (((phase or frequency) near2 (detect\$3 or compar\$4)) same (oscillator\$1 same delay\$3)) same (control with phase with delay\$3) ) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:32 |
| S53 | 10598 | ((phase near2 (detect\$3 or compar\$5)) with control\$4) and pll  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:33 |
| S54 | 8622  | ((phase near2 (detect\$3 or compar\$5)) with control\$4) same (vco or oscillat\$4)) and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:34 |
| S55 | 4807  | ((phase near2 (detect\$3 or compar\$5)) with control\$4 with filter) same (vco or oscillat\$4)) and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/27 13:35 |

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| S56 | 970  | ((phase near2 (detect\$3 or compar\$5)) with control\$4 with filter with clock) same (vco or oscillat\$4)) and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 13:35 |
| S57 | 87   | ((phase near2 (detect\$3 or compar\$5)) with control\$4 with filter with (delay\$4 with clock)) same (vco or oscillat\$4)) and pll                                   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 14:12 |
| S58 | 722  | matsushita.as. and pll and (phase near comparator)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 14:12 |
| S59 | 22   | (matsushita.as. and pll and (phase near comparator)) and (delay near element)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 15:03 |
| S60 | 1308 | delay with (control near2 signal) with (phase near2 (detect\$3 or compar\$6))  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 15:04 |
| S61 | 326  | (delay with (control near2 signal) with (phase near2 (detect\$3 or compar\$6))) and (vco or oscillat\$4) and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 15:04 |
| S62 | 252  | ((delay with (control near2 signal) with (phase near2 (detect\$3 or compar\$6))) and (vco or oscillat\$4) and pll) and (delay\$3 with clock)                         | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/27 15:04 |
| S63 | 105  | ((delay with (control near2 signal) with (phase near2 (detect\$3 or compar\$6))) and (vco or oscillat\$4) and pll) and (delay\$3 with clock) and (delay with filter) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/28 11:07 |
| S64 | 409  | delay\$4 near4 (clock and (oscillat\$3 or vco) and (phase near2 (detect\$3 or compar\$5)))   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/28 11:08 |
| S65 | 242  | pll and (delay\$4 near4 (clock and (oscillat\$3 or vco) and (phase near2 (detect\$3 or compar\$5))))   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/28 11:08 |
| S66 | 187  | (pll and (delay\$4 near4 (clock and (oscillat\$3 or vco) and (phase near2 (detect\$3 or compar\$5)))) and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/28 15:41 |
| S67 | 187  | (pll and (delay\$4 near4 (clock and (oscillat\$3 or vco) and (phase near2 (detect\$3 or compar\$5)))) and filter   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/10/28 15:41 |

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| S68 | 15088 | data near recover\$4   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:51 |
| S69 | 26    | ((pll and (delay\$4 near4 (clock<br>and (oscillat\$3 or vco) and (phase<br>near2 (detect\$3 or compar\$5))))<br>and filter ) and (data near<br>recover\$4)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:44 |
| S70 | 0     | fifo and (((pll and (delay\$4 near4<br>(clock and (oscillat\$3 or vco) and<br>(phase near2 (detect\$3 or<br>compar\$5)))) and filter ) and<br>(data near recover\$4))  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:45 |
| S71 | 1216  | fifo and (data near recover\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:45 |
| S72 | 289   | (fifo and (data near recover\$4))<br>and pll   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:45 |
| S73 | 18    | ((fifo and (data near recover\$4))<br>and pll) and (clock near delay\$3)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:45 |
| S74 | 4     | ((data near recover\$4) same fifo)<br>and pll and (phase near (detect\$3<br>or comparat\$3))   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/10/28 15:52 |
| S75 | 15    | (US-5036298-\$ or US-6718473-\$<br>or US-6483871-\$ or US-6127865-\$<br>or US-6028903-\$ or US-6414528-\$<br>or US-5347232-\$ or US-5212601-\$<br>or US-6542038-\$ or US-6356158-\$<br>or US-6198415-\$ or US-6259293-\$<br>or US-6041089-\$ or US-6542040-\$<br>or US-6396888-\$).did.                | USPAT                                      | OR | OFF | 2004/10/28 15:54 |
| S76 | 13    | data and ((US-5036298-\$ or<br>US-6718473-\$ or US-6483871-\$ or<br>US-6127865-\$ or US-6028903-\$ or<br>US-6414528-\$ or US-5347232-\$ or<br>US-5212601-\$ or US-6542038-\$ or<br>US-6356158-\$ or US-6198415-\$ or<br>US-6259293-\$ or US-6041089-\$ or<br>US-6542040-\$ or US-6396888-\$).<br>did.) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/28 15:54 |

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| S77 | 11    | ((data near (recover\$3 or detect\$3 or sync\$12)) or (data same pll)) and ((US-5036298-\$ or US-6718473-\$ or US-6483871-\$ or US-6127865-\$ or US-6028903-\$ or US-6414528-\$ or US-5347232-\$ or US-5212601-\$ or US-6542038-\$ or US-6356158-\$ or US-6198415-\$ or US-6259293-\$ or US-6041089-\$ or US-6542040-\$ or US-6396888-\$). did.) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/28 16:12 |
| S78 | 2     | ("5036298").PN.  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | OFF | 2004/10/28 16:12 |
| S79 | 2     | ((("5036298").PN.) and zero  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/28 16:12 |
| S80 | 45    | (clock near delay\$4) and ((phase near (detect\$3 or comparat\$4)) same (retim\$4) same data)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/29 18:28 |
| S81 | 533   | 375/327.ccls.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/29 18:29 |
| S82 | 168   | 375/327.ccls. and pll and (phase near (detect\$4 or comparat\$4))  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/29 18:29 |
| S83 | 7     | (375/327.ccls. and pll and (phase near (detect\$4 or comparat\$4))) and (clock near delay\$4)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        | OR | OFF | 2004/10/29 18:30 |
| S84 | 70599 | phase near detect\$4   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/06/29 15:26 |
| S85 | 2504  | vco with delay\$4  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/06/29 15:27 |



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| S86 | 1172   | S84 and S85                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:27 |
| S87 | 23     | S86 and (delay\$4 near filter\$4)               | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:36 |
| S88 | 245006 | (phase frequency) near3 (detect\$4 comparat\$4) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:36 |
| S89 | 38782  | (oscillator vco) same delay\$4                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |
| S90 | 6729   | S88 same S89                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |
| S91 | 19880  | (oscillator vco) with delay\$4                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |
| S92 | 3296   | S88 same S91                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |
| S93 | 1625   | S92 and (delay\$4 same clock)                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |

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| S94      | 1385  | S92 and (delay\$4 with clock)      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:37 |
| S95      | 785   | S94 and (delay\$4 same filter\$4)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:38 |
| S96      | 549   | S94 and (delay\$4 with filter\$4)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:44 |
| S97      | 12998 | S84 same clock                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:39 |
| S98      | 312   | S96 and S97                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:39 |
| S99      | 1585  | S84 same (delay\$4 with filter\$4) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:45 |
| S10<br>0 | 207   | S98 and S99                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:46 |
| S10<br>1 | 3621  | S88 same (delay\$4 with filter\$4) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:45 |

|          |      |   |   |    |    |                  |
|----------|------|---|---|----|----|------------------|
| S10<br>2 | 1585 | S99 same S101   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/29 15:45 |
| S10<br>3 | 158  | S98 and S99   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON | 2005/06/29 15:46 |
| S10<br>4 | 6    | ("4510461"   "4947382"  <br>"5374904"   "5404250"  <br>"5475344"   "5717362").PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/06/29 15:51 |
| S10<br>5 | 2    | ("6542040").URPN.   | USPAT   | OR | ON | 2005/06/29 15:51 |
| S10<br>6 | 751  | pll and (clock with delay\$4 with<br>filter\$4)                                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:52 |
| S10<br>7 | 343  | pll and (clock with delay\$4 with<br>filter\$4 with control\$4)                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:53 |
| S10<br>8 | 298  | S107 and (phase near (detect\$4<br>compar\$4))                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:57 |
| S10<br>9 | 14   | S108 and (delay\$4 near filter\$4)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:56 |
| S11<br>0 | 2661 | pll and (delay\$4 with control with<br>clock)                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:56 |
| S11<br>1 | 1196 | S110 and (clock near delay\$4)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:56 |

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|----------|-----|---|---|----|----|------------------|
| S11<br>2 | 762 | S111 and (phase near (detect\$4<br>compar\$4))                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:57 |
| S11<br>3 | 22  | (delay\$4 near filter\$4) and S112  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/08 18:57 |
| S11<br>4 | 110 | vco with (clock near delay\$3)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 10:59 |
| S11<br>5 | 87  | pll and (clock near delay\$3 near<br>control\$4)                                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 11:07 |
| S11<br>6 | 595 | pll same (delay near control\$4)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 11:07 |
| S11<br>7 | 422 | S116 same phase   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 11:08 |
| S11<br>8 | 331 | S117 and (oscillat\$4 vco nco)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 11:08 |
| S11<br>9 | 225 | S117 and (oscillat\$4 vco nco)  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON | 2005/07/22 11:08 |
| S12<br>0 | 6   | ("5019785"   "5339278"  <br>"5574757"   "5596300"  <br>"5638410"   "5648964").PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/07/22 11:26 |
| S12<br>1 | 4   | ("6310498").URPN.   | USPAT   | OR | ON | 2005/07/22 11:41 |

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|----------|--------|--|--|----|----|------------------|
| S12<br>2 | 2      | ("5389898"   "5889436").PN.  | US-PGPUB;<br>USPAT;<br>USOCR                         | OR | ON | 2005/07/22 11:53 |
| S12<br>3 | 90     | (phase near (error difference<br>detect\$4)) same vco same<br>(control\$4 near delay\$4)   | US-PGPUB;<br>USPAT;<br>USOCR                         | OR | ON | 2005/07/22 11:55 |
| S12<br>4 | 80     | (phase near (error difference<br>detect\$4)) same vco same<br>(control\$4 near delay\$4)   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 11:59 |
| S12<br>5 | 37     | (phase near (error difference<br>detect\$4)) with (control\$4 near<br>delay\$4) same vco   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 12:00 |
| S12<br>6 | 37     | ((phase near (error difference<br>detect\$4)) with (control\$4 near<br>delay\$4)) same vco | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 12:03 |
| S12<br>7 | 27     | (voltage near control\$4 near<br>delay\$4) with (phase near shift)                         | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 13:01 |
| S12<br>8 | 0      | vco same S127  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 12:03 |
| S12<br>9 | 6      | vco and S127   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 12:03 |
| S13<br>0 | 177031 | (phase frequency) near2 (detect\$4<br>comparat\$3)   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 13:01 |
| S13<br>1 | 50616  | oscillat\$4 same delay\$4  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 13:03 |
| S13<br>2 | 5598   | S130 same S131   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 13:35 |

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|----------|--------|--|---|----|-----|------------------|
| S13<br>3 | 815    | oscillat\$4 same (clock near<br>delay\$4)  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:04 |
| S13<br>4 | 5598   | S130 same S132   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:04 |
| S13<br>5 | 160    | S130 same S133   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:30 |
| S13<br>6 | 2      | ("5856762").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/07/22 13:34 |
| S13<br>7 | 2463   | 327/149,156,158,161.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/07/22 15:57 |
| S13<br>8 | 177031 | (phase frequency) near2 (detect\$4<br>comparat\$3)   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:35 |
| S13<br>9 | 50616  | oscillat\$4 same delay\$4  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:35 |
| S14<br>0 | 5598   | S138 same S139   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:35 |
| S14<br>1 | 319    | S137 and S140  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 13:35 |
| S14<br>2 | 8      | ("5347234"   "5475344"  <br>"5706218"   "5717362"  <br>"5864258"   "6094103"  <br>"6104253"   "6188291").PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON  | 2005/07/22 13:47 |

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|----------|------|--|---|----|----|------------------|
| S14<br>3 | 0    | ("6683504").URPN.  | USPAT   | OR | ON | 2005/07/22 13:48 |
| S14<br>4 | 5    | ("4409564"   "4472685"  <br>"4697156"   "5495206"  <br>"5907253").PN.  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/07/22 14:22 |
| S14<br>5 | 5    | ("6359950").URPN.  | USPAT   | OR | ON | 2005/07/22 14:23 |
| S14<br>6 | 3    | ("5459756"   "5481573"  <br>"5675620").PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/07/22 15:46 |
| S14<br>7 | 1    | ("6353648").URPN.  | USPAT   | OR | ON | 2005/07/22 15:47 |
| S14<br>8 | 8565 | (divid\$4 delay) same pll  | USPAT   | OR | ON | 2005/07/22 15:48 |
| S14<br>9 | 3278 | (divid\$4 delay) same pll same vco   | USPAT   | OR | ON | 2005/07/22 15:48 |
| S15<br>0 | 2224 | (divid\$4 delay) same pll same vco<br>same filter\$4   | USPAT   | OR | ON | 2005/07/22 15:48 |
| S15<br>1 | 1764 | (divid\$4 delay) same pll same vco<br>same filter\$4 same (phase near<br>(detect\$4 compar\$4))  | USPAT   | OR | ON | 2005/07/22 16:09 |
| S15<br>2 | 385  | 375/130-377.ccls. and S151   | USPAT   | OR | ON | 2005/07/22 15:57 |
| S15<br>3 | 2463 | 327/149,156,158,161.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 15:57 |
| S15<br>4 | 70   | S152 and S153  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 15:58 |
| S15<br>5 | 89   | (divid\$4 delay) same pll same vco<br>same filter\$4 and ((phase near<br>(detect\$4 compar\$4)) with<br>(memory ram rom storage fifo))   | USPAT   | OR | ON | 2005/07/22 19:00 |
| S15<br>6 | 55   | ((phase near (detect\$4<br>compar\$4)) with fifo)  | USPAT   | OR | ON | 2005/07/22 16:18 |
| S15<br>7 | 15   | ("4941156"   "5142555"  <br>"5410723"   "5493243"  <br>"5602882"   "5604741"  <br>"5793824"   "5844436"  <br>"5956748"   "6081844"  <br>"6118835"   "6226698"  <br>"6278718"   "6421770"  <br>"6463111").PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/07/22 16:34 |

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| S15<br>8 | 526    | (fifo with (read and write)) and<br>(phase near2 (detect\$4<br>comparat\$4))  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2005/07/22 16:34 |
| S15<br>9 | 322    | (fifo with (read and write)) and<br>(phase near2 (detect\$4<br>comparat\$4))  | USPAT   | OR | ON | 2005/07/22 16:34 |
| S16<br>0 | 53839  | (fifo with (read and write)) dame<br>(phase near2 (detect\$4<br>comparat\$4)) | USPAT   | OR | ON | 2005/07/22 16:35 |
| S16<br>1 | 22     | (fifo with (read and write)) same<br>(phase near2 (detect\$4<br>comparat\$4)) | USPAT   | OR | ON | 2005/07/22 16:35 |
| S16<br>2 | 2927   | (delay\$4 divid\$4) with filter with<br>pll                                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 17:35 |
| S16<br>3 | 1510   | (delay\$4 divid\$4) with filter with<br>pll with vco                          | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 17:34 |
| S16<br>4 | 177031 | (phase frequency) near2 (detect\$4<br>comparat\$3)                            | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON | 2005/07/22 17:34 |
| S16<br>5 | 965    | S164 with S163  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 17:34 |
| S16<br>6 | 965    | S164 with S163  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON | 2005/07/22 17:35 |
| S16<br>7 | 688    | ((delay\$4 divid\$4) near8 filter)<br>and S166                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 17:35 |
| S16<br>8 | 688    | ((delay\$4 divid\$4) near8 filter)<br>and S166                                | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON | 2005/07/22 17:37 |



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| S16<br>9 | 28539890 | @pd <= "20010326"   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 17:38 |
| S17<br>0 | 412      | S169 and S168   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:30 |
| S17<br>1 | 1360     | nrz with data with clock  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:31 |
| S17<br>2 | 84       | nrz with (data near code\$2) with clock   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:32 |
| S17<br>3 | 243      | (manchester near code) with clock   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:54 |
| S17<br>4 | 76       | birk.in. and phase  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:54 |
| S17<br>5 | 5        | birk.in. and phase and analog.as.   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OR | ON  | 2005/07/22 18:56 |
| S17<br>6 | 2        | ("6768358").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/07/22 18:56 |
| S17<br>7 | 9        | ("5606293"   "5623234"  <br>"5774701"   "5963068"  <br>"6005904"   "6031429"  <br>"6118306"   "6255882"  <br>"6356128").PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON  | 2005/07/22 18:56 |
| S17<br>8 | 2        | (divid\$4 delay) same pll same vco<br>same filter\$4 and ((phase near<br>(detect\$4 compar\$4)) with (fifo))                | USPAT   | OR | ON  | 2005/07/22 19:02 |

|          |          |   |  |    |    |                  |
|----------|----------|---|--|----|----|------------------|
| S17<br>9 | 4        | (divid\$4 delay) same pll same filter\$4 and ((phase near (detect\$4 compar\$4)) with (fifo)) | USPAT  | OR | ON | 2005/07/22 19:00 |
| S18<br>0 | 9        | (divid\$4 delay) same pll and ((phase near (detect\$4 compar\$4)) with (fifo))                | USPAT  | OR | ON | 2005/07/22 19:01 |
| S18<br>1 | 10       | analog.as. and (phase near comparator)  | USPAT  | OR | ON | 2005/07/22 19:01 |
| S18<br>2 | 0        | ("6768358").URPN.   | USPAT  | OR | ON | 2005/07/22 19:02 |
| S18<br>3 | 2035     | (divid\$4 delay) same pll same vco same filter\$4 and ((phase near (detect\$4 compar\$4)))    | USPAT  | OR | ON | 2005/07/22 19:02 |
| S18<br>4 | 1764     | (divid\$4 delay) same pll same vco same filter\$4 same ((phase near (detect\$4 compar\$4)))   | USPAT  | OR | ON | 2005/07/22 19:03 |
| S18<br>5 | 28539890 | @pd <= "20010326"   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/07/22 19:03 |
| S18<br>6 | 1129     | S185 and S184   | USPAT  | OR | ON | 2005/07/22 19:03 |
| S18<br>7 | 36       | S186 and (data near recovery)   | USPAT  | OR | ON | 2005/07/25 08:13 |